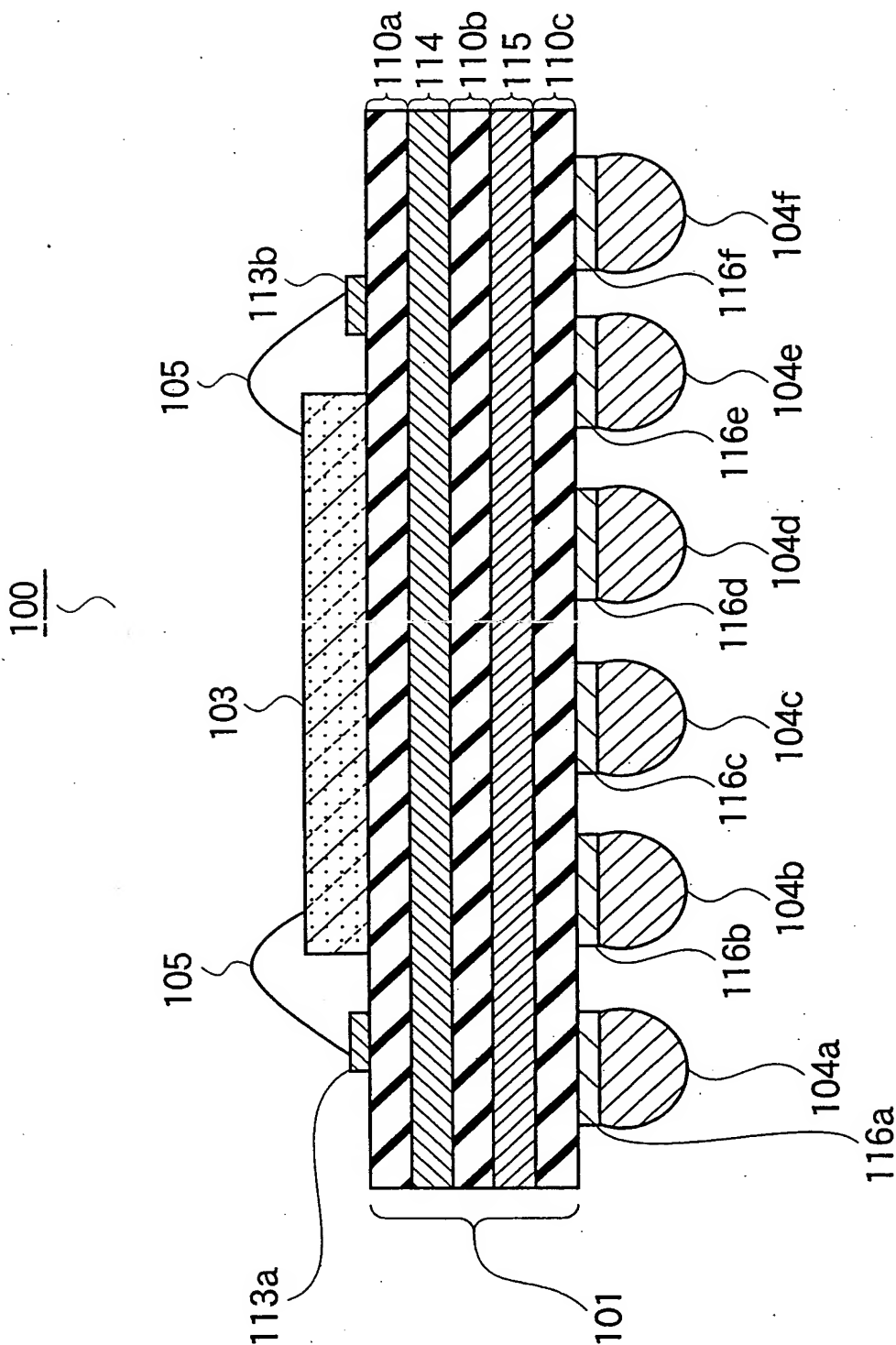


**FIG. 1**  
**PRIOR ART**



**FIG. 2**  
**PRIOR ART**

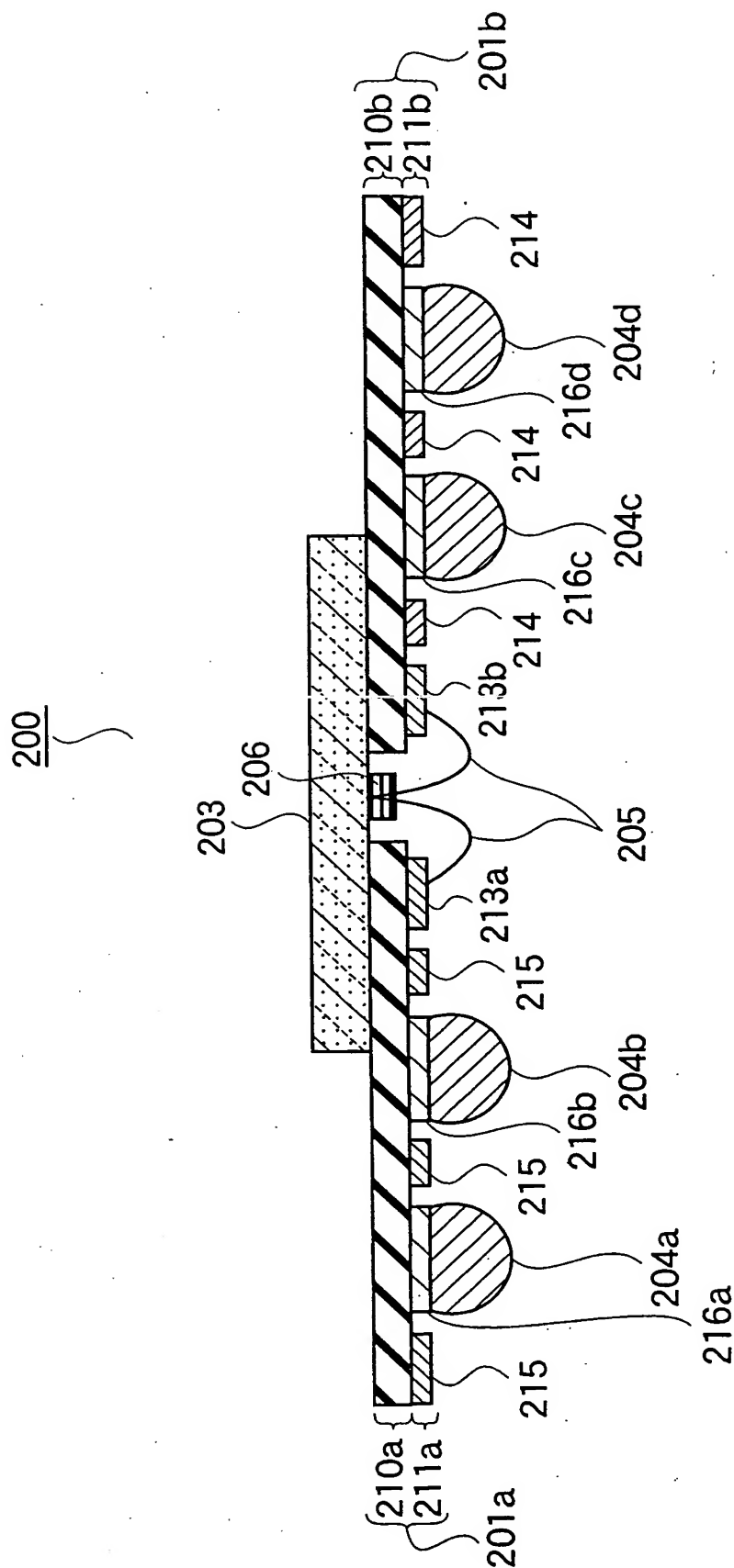


FIG. 3

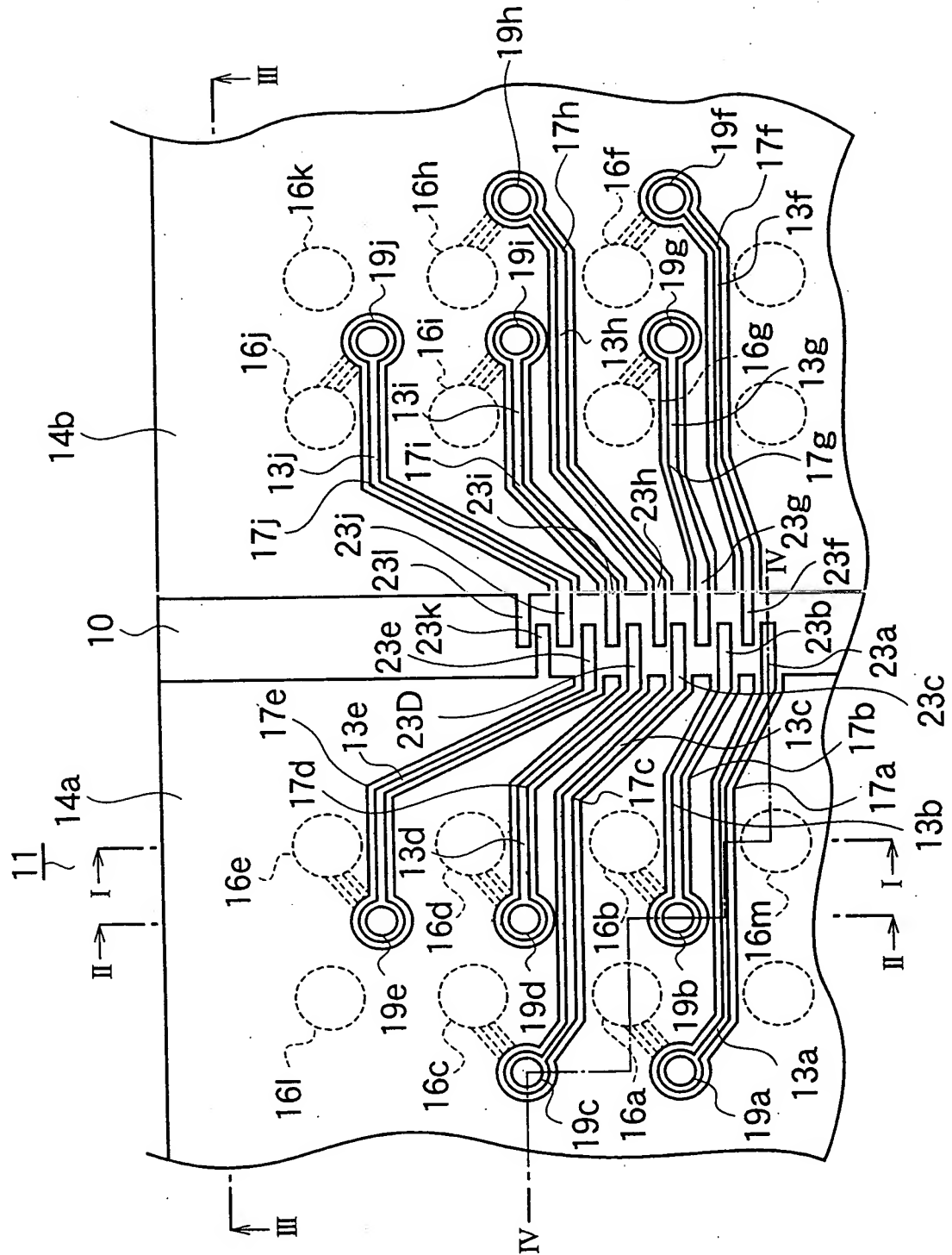
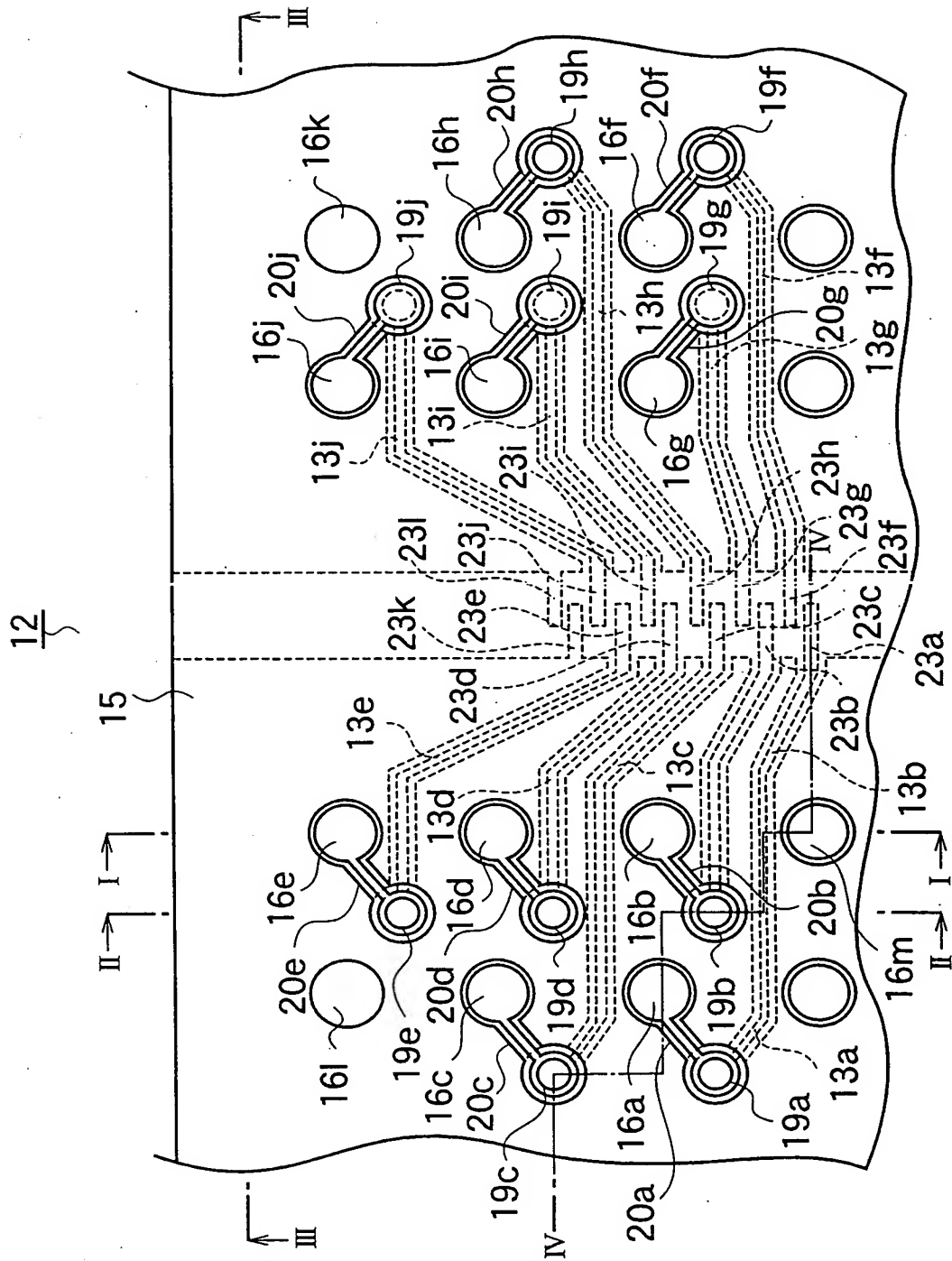
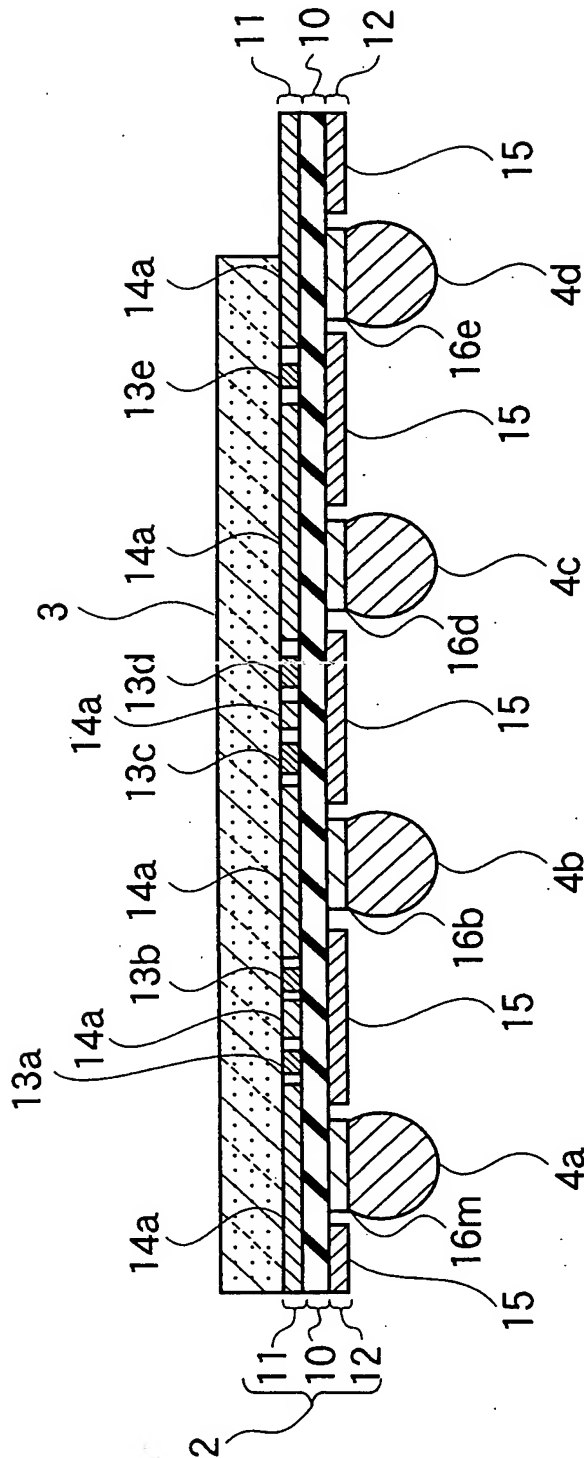


FIG. 4

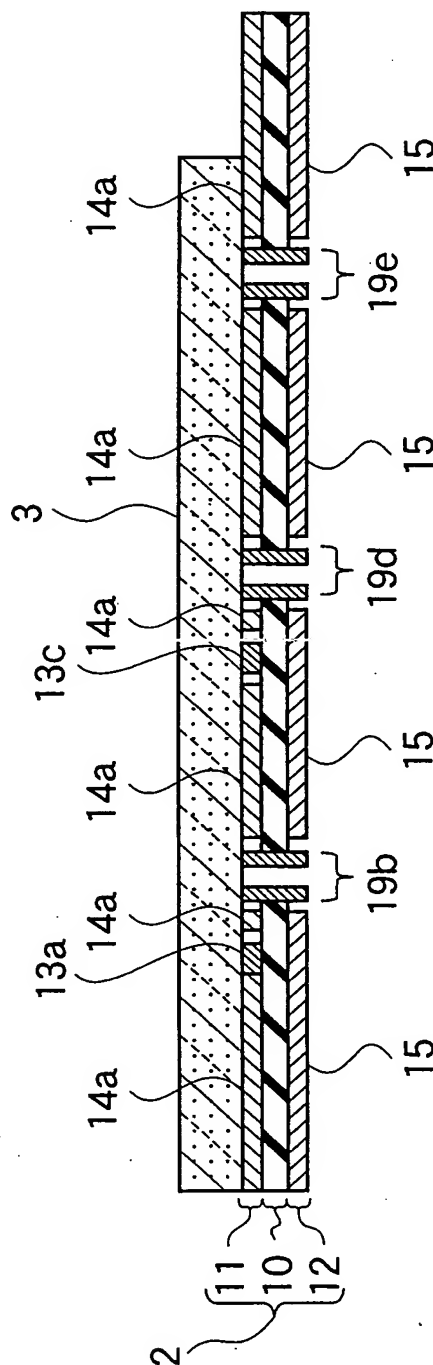


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FIG. 5

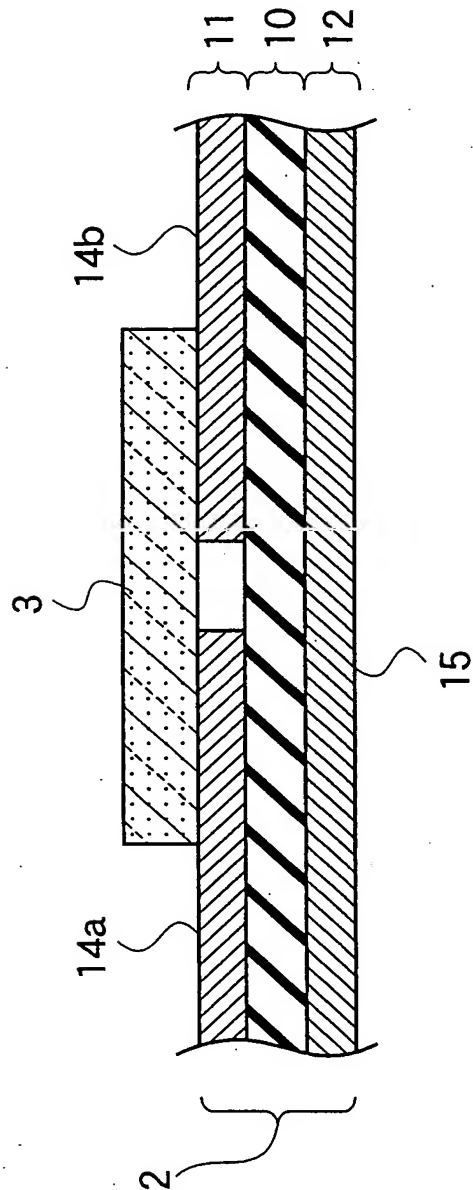


**FIG. 6**



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FIG. 7



A cross-sectional view of a substrate 10, which is a rectangular block with diagonal hatching. A wavy line points from the label 10 to the top surface of the substrate.

A cross-sectional view of a multi-layered structure 10. The structure consists of alternating layers of a material with diagonal hatching (19b) and a material with a stippled pattern (19c). The layers are stacked horizontally. A label 10 points to the entire assembly.

A cross-sectional view of a multi-layered structure 10. The structure consists of alternating layers of material 22 (hatched with diagonal lines) and material 19b (unhatched). The top and bottom layers are 22. The middle section contains two layers of 19b separated by a layer of 22. The label 10 points to the rightmost part of the structure.

This cross-sectional view shows a substrate with a central channel region and side regions. The channel region contains a central layer (14a) and is flanked by side regions (15). The side regions are further divided into sub-regions (16a, 16b, 16m). The device includes various layers (14a, 15, 16a, 16b, 16m, 19a, 19b, 19c, 24a, 24b, 27, 28, 23a) and contacts (14a, 15, 16a, 16b, 16m, 19a, 19b, 19c, 24a, 24b, 27, 28, 23a) for electrical connection.

[illegible]



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FIG. 9

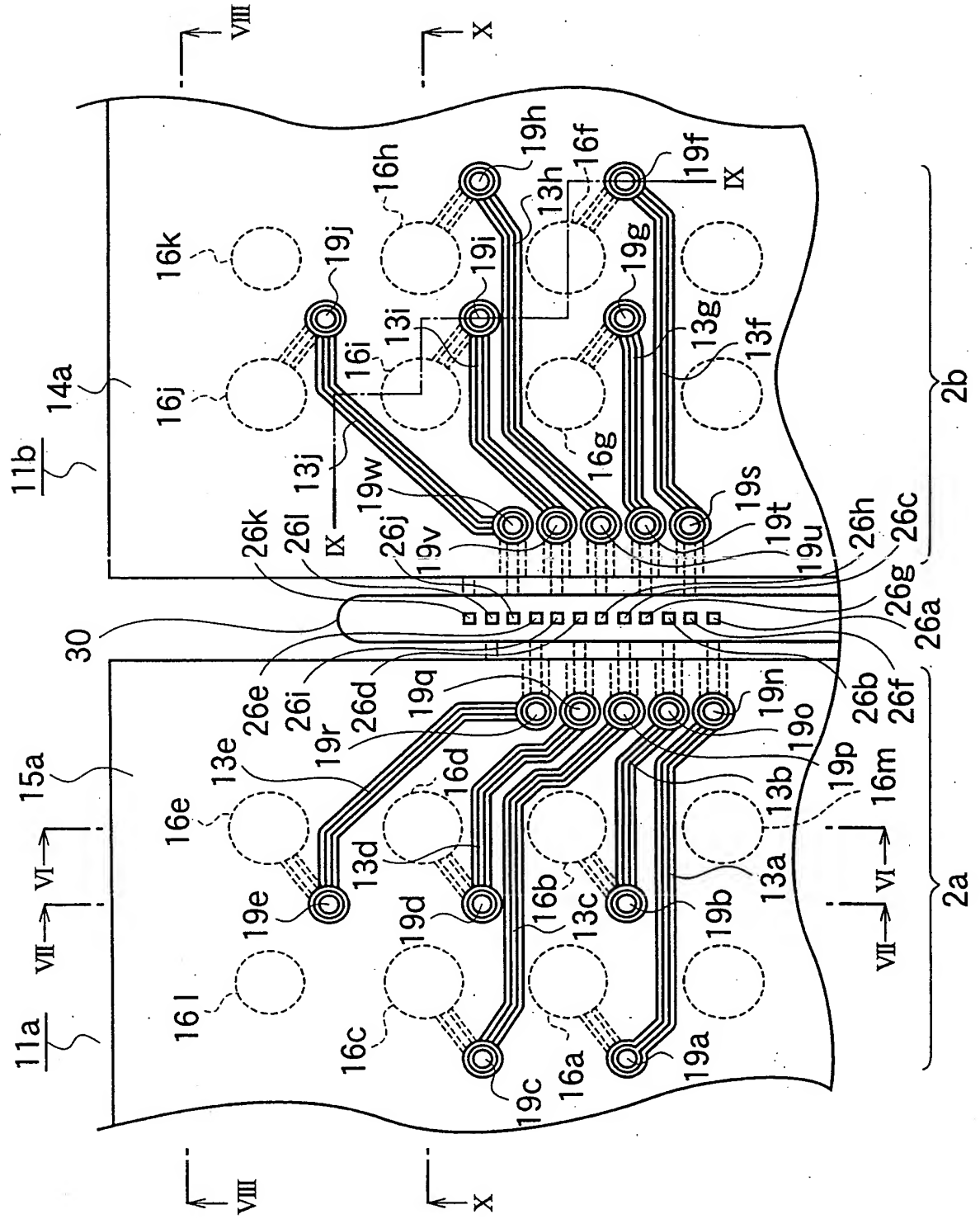


FIG. 1 is a schematic diagram of a semiconductor device 100. The device includes a substrate 10 with a central interconnect region 12 and two side regions 14a and 14b. The central region 12 contains a grid of conductive lines 19a-19p and 20a-20j, with various contact pads 16a-16m and 20a-20j. The side regions 14a and 14b contain additional conductive lines and contact pads. A cross-section line VIII-VIII is indicated at the bottom.

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FIG. 11

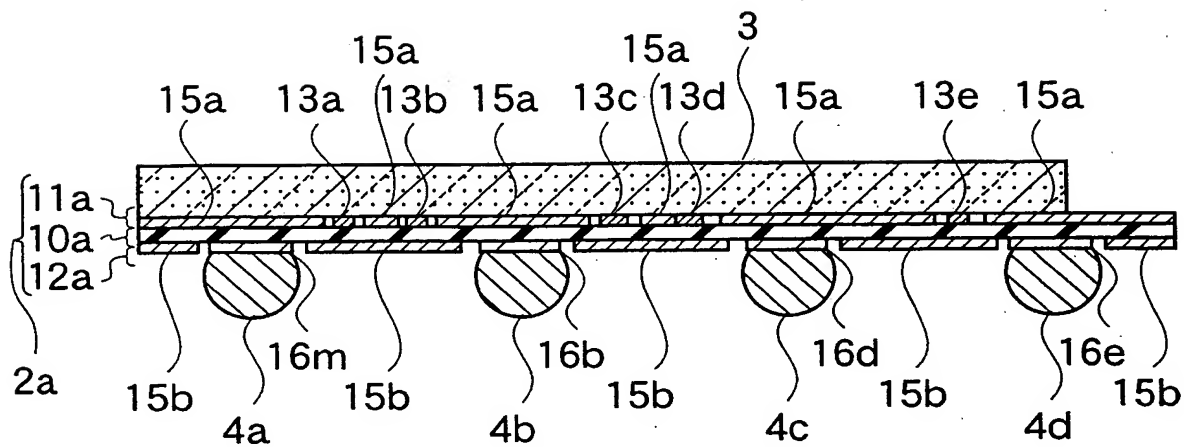
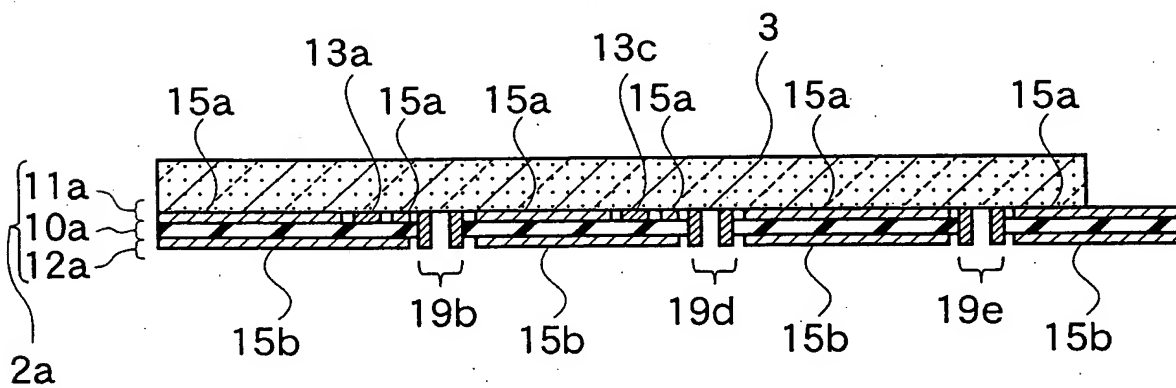


FIG. 12





A cross-sectional view of a multi-layered structure 10b. The structure consists of alternating layers of a first material (hatched pattern) and a second material (white). The layers are labeled 19i, 22, 19i, 22, 19f, and 22 from left to right. The hatched layers are labeled 19i and 19f, and the white layers are labeled 22.

A cross-sectional view of a segmented strip 10b. It consists of three rectangular segments connected by thin dividers. Each segment has a central core with diagonal hatching, surrounded by a frame with cross-hatching. The entire assembly is enclosed in a thin outer layer.

[illegible]

This cross-sectional view shows a semiconductor device with a central trench (25). The device is composed of several layers: a top layer (3), a layer (13e) with a central opening, and a substrate (26). The substrate (26) is divided into two main regions, 2a and 2b, by the trench (25). Region 2a contains layers 11a, 10a, and 12a, while region 2b contains layers 11b, 10b, and 12b. Various other layers and features are labeled, including 15a, 15b, 16c, 16d, 16e, 16f, 16g, 16h, 16i, 16j, 16k, 16l, 16m, 16n, 16o, 16p, 16q, 16r, 16s, 16t, 16u, 16v, 16w, 16x, 16y, 16z, 16aa, 16ab, 16ac, 16ad, 16ae, 16af, 16ag, 16ah, 16ai, 16aj, 16ak, 16al, 16am, 16an, 16ao, 16ap, 16aq, 16ar, 16as, 16at, 16au, 16av, 16aw, 16ax, 16ay, 16az, 16ba, 16bb, 16bc, 16bd, 16be, 16bf, 16bg, 16bh, 16bi, 16bj, 16bk, 16bl, 16bm, 16bn, 16bo, 16bp, 16bq, 16br, 16bs, 16bt, 16bu, 16bv, 16bw, 16bx, 16by, 16bz, 16ca, 16cb, 16cc, 16cd, 16ce, 16cf, 16cg, 16ch, 16ci, 16cj, 16ck, 16cl, 16cm, 16cn, 16co, 16cp, 16cq, 16cr, 16cs, 16ct, 16cu, 16cv, 16cw, 16cx, 16cy, 16cz, 16da, 16db, 16dc, 16dd, 16de, 16df, 16dg, 16dh, 16di, 16dj, 16dk, 16dl, 16dm, 16dn, 16do, 16dp, 16dq, 16dr, 16ds, 16dt, 16du, 16dv, 16dw, 16dx, 16dy, 16dz, 16ea, 16eb, 16ec, 16ed, 16ee, 16ef, 16eg, 16eh, 16ei, 16ej, 16ek, 16el, 16em, 16en, 16eo, 16ep, 16eq, 16er, 16es, 16et, 16eu, 16ev, 16ew, 16ex, 16ey, 16ez, 16fa, 16fb, 16fc, 16fd, 16fe, 16ff, 16fg, 16fh, 16fi, 16fj, 16fk, 16fl, 16fm, 16fn, 16fo, 16fp, 16fq, 16fr, 16fs, 16ft, 16fu, 16fv, 16fw, 16fx, 16fy, 16fz, 16ga, 16gb, 16gc, 16gd, 16ge, 16gf, 16gg, 16gh, 16gi, 16gj, 16gk, 16gl, 16gm, 16gn, 16go, 16gp, 16gq, 16gr, 16gs, 16gt, 16gu, 16gv, 16gw, 16gx, 16gy, 16gz, 16ha, 16hb, 16hc, 16hd, 16he, 16hf, 16hg, 16hi, 16hj, 16hk, 16hl, 16hm, 16hn, 16ho, 16hp, 16hq, 16hr, 16hs, 16ht, 16hu, 16hv, 16hw, 16hx, 16hy, 16hz, 16ia, 16ib, 16ic, 16id, 16ie, 16if, 16ig, 16ih, 16ii, 16ij, 16ik, 16il, 16im, 16in, 16io, 16ip, 16iq, 16ir, 16is, 16it, 16iu, 16iv, 16iw, 16ix, 16iy, 16iz, 16ja, 16jb, 16jc, 16jd, 16je, 16jf, 16jg, 16jh, 16ji, 16jj, 16jk, 16jl, 16jm, 16jn, 16jo, 16jp, 16jq, 16jr, 16js, 16jt, 16ju, 16jv, 16jw, 16jx, 16jy, 16jz, 16ka, 16kb, 16kc, 16kd, 16ke, 16kf, 16kg, 16kh, 16ki, 16kj, 16kk, 16kl, 16km, 16kn, 16ko, 16kp, 16kq, 16kr, 16ks, 16kt, 16ku, 16kv, 16kw, 16kx, 16ky, 16kz, 16la, 16lb, 16lc, 16ld, 16le, 16lf, 16lg, 16lh, 16li, 16lj, 16lk, 16ll, 16lm, 16ln, 16lo, 16lp, 16lq, 16lr, 16ls, 16lt, 16lu, 16lv, 16lw, 16lx, 16ly, 16lz, 16ma, 16mb, 16mc, 16md, 16me, 16mf, 16mg, 16mh, 16mi, 16mj, 16mk, 16ml, 16mm, 16mn, 16mo, 16mp, 16mq, 16mr, 16ms, 16mt, 16mu, 16mv, 16mw, 16mx, 16my, 16mz, 16na, 16nb, 16nc, 16nd, 16ne, 16nf, 16ng, 16nh, 16ni, 16nj, 16nk, 16nl, 16nm, 16nn, 16no, 16np, 16nq, 16nr, 16ns, 16nt, 16nu, 16nv, 16nw, 16nx, 16ny, 16nz, 16oa, 16ob, 16oc, 16od, 16oe, 16of, 16og, 16oh, 16oi, 16oj, 16ok, 16ol, 16om, 16on, 16oo, 16op, 16oq, 16or, 16os, 16ot, 16ou, 16ov, 16ow, 16ox, 16oy, 16oz, 16pa, 16pb, 16pc, 16pd, 16pe, 16pf, 16pg, 16ph, 16pi, 16pj, 16pk, 16pl, 16pm, 16pn, 16po, 16pp, 16pq, 16pr, 16ps, 16pt, 16pu, 16pv, 16pw, 16px, 16py, 16pz, 16qa, 16qb, 16qc, 16qd, 16qe, 16qf, 16qg, 16qh, 16qi, 16qj, 16qk, 16ql, 16qm, 16qn, 16qo, 16qp, 16qq, 16qr, 16qs, 16qt, 16qu, 16qv, 16qw, 16qx, 16qy, 16qz, 16ra, 16rb, 16rc, 16rd, 16re, 16rf, 16rg, 16rh, 16ri, 16rj, 16rk, 16rl, 16rm, 16rn, 16ro, 16rp, 16rq, 16rr, 16rs, 16rt, 16ru, 16rv, 16rw, 16rx, 16ry, 16rz, 16sa, 16sb, 16sc, 16sd, 16se, 16sf, 16sg, 16sh, 16si, 16sj, 16sk, 16sl, 16sm, 16sn, 16so, 16sp, 16sq, 16sr, 16ss, 16st, 16su, 16sv, 16sw, 16sx, 16sy, 16sz, 16ta, 16tb, 16tc, 16td, 16te, 16tf, 16tg, 16th, 16ti, 16tj, 16tk, 16tl, 16tm, 16tn, 16to, 16tp, 16tq, 16tr, 16ts, 16tt, 16tu, 16tv, 16tw, 16tx, 16ty, 16tz, 16ua, 16ub, 16uc, 16ud, 16ue, 16uf, 16ug, 16uh, 16ui, 16uj, 16uk, 16ul, 16um, 16un, 16uo, 16up, 16uq, 16ur, 16us, 16ut, 16uu, 16uv, 16uw, 16ux, 16uy, 16uz, 16va, 16vb, 16vc, 16vd, 16ve, 16vf, 16vg, 16vh, 16vi, 16vj, 16vk, 16vl, 16vm, 16vn, 16vo, 16vp, 16vq, 16vr, 16vs, 16vt, 16vu, 16vv, 16vw, 16vx, 16vy, 16vz, 16wa, 16wb, 16wc, 16wd, 16we, 16wf, 16wg, 16wh, 16wi, 16wj, 16wk, 16wl, 16wm, 16wn, 16wo, 16wp, 16wq, 16wr, 16ws, 16wt, 16wu, 16wv, 16ww, 16wx, 16wy, 16wz, 16xa, 16xb, 16xc, 16xd, 16xe, 16xf, 16xg, 16xh, 16xi, 16xj, 16xk, 16xl, 16xm, 16xn, 16xo, 16xp, 16xq, 16xr, 16xs, 16xt, 16xu, 16xv, 16xw, 16xx, 16xy, 16xz, 16ya, 16yb, 16yc, 16yd, 16ye, 16yf, 16yg, 16yh, 16yi, 16yj, 16yk, 16yl, 16ym, 16yn, 16yo, 16yp, 16yq, 16yr, 16ys, 16yt, 16yu, 16yv, 16yw, 16yx, 16yy, 16yz, 16za, 16zb, 16zc, 16zd, 16ze, 16zf, 16zg, 16zh, 16zi, 16zj, 16zk, 16zl, 16zm, 16zn, 16zo, 16zp, 16zq, 16zr, 16zs, 16zt, 16zu, 16zv, 16zw, 16zx, 16zy, 16zz.